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Papenfuβ

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(54) **DEVICE FOR MAKING POMPONS**

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D04D 11/00 (2006.01)

(52) **U.S. Cl.**
CPC ***D04D 7/06*** (2013.01); ***D04D 11/00*** (2013.01)

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USPC 28/147, 149, 150; 223/46, 44
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

779,614	A *	1/1905	Loe	B65D 33/1675	24/30.5 R
1,819,234	A *	8/1931	Dolia	A41G 1/02	28/150
2,521,863	A *	9/1950	Mertz	A41G 1/02	223/46
3,000,074	A *	9/1961	Butkiewicz	D04D 7/06	28/147
3,110,077	A	11/1963	Spear		
3,287,785	A	11/1966	Ciroli		
3,413,699	A	12/1968	Millay		
D275,151	S	8/1984	Okada		
D323,975	S *	2/1992	Wise	B65D 33/1675	D8/396
6,655,559	B2	12/2003	Goldstein		
8,316,517	B2	11/2012	Fujiwara		

FOREIGN PATENT DOCUMENTS

CH	87947	A *	1/1921	D04D 11/00
DE	501237	C *	6/1930	D04D 7/00
DE	3722854	A1	1/1989	
DE	202018101029	U1 *	3/2018	D04D 11/00
JP	3436751	B2	8/2003	

OTHER PUBLICATIONS

U.S. Appl. No. 29/692,466, filed May 24, 2019.

* cited by examiner

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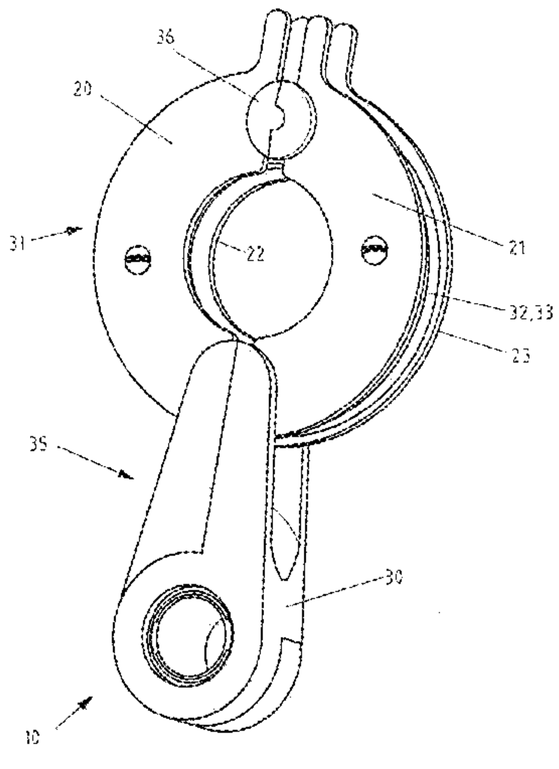
(57) **ABSTRACT**

The new device for producing pompons comprises a ring carrier, which holds two winding disks in a holding region, wherein two half-ring-shaped disk halves together form a winding disk. Outside the holding area for the disc halves, the ring carrier has a handle. This handle can be grasped during the entire pompon production without hindering the winding process or the cutting.

14 Claims, 5 Drawing Sheets



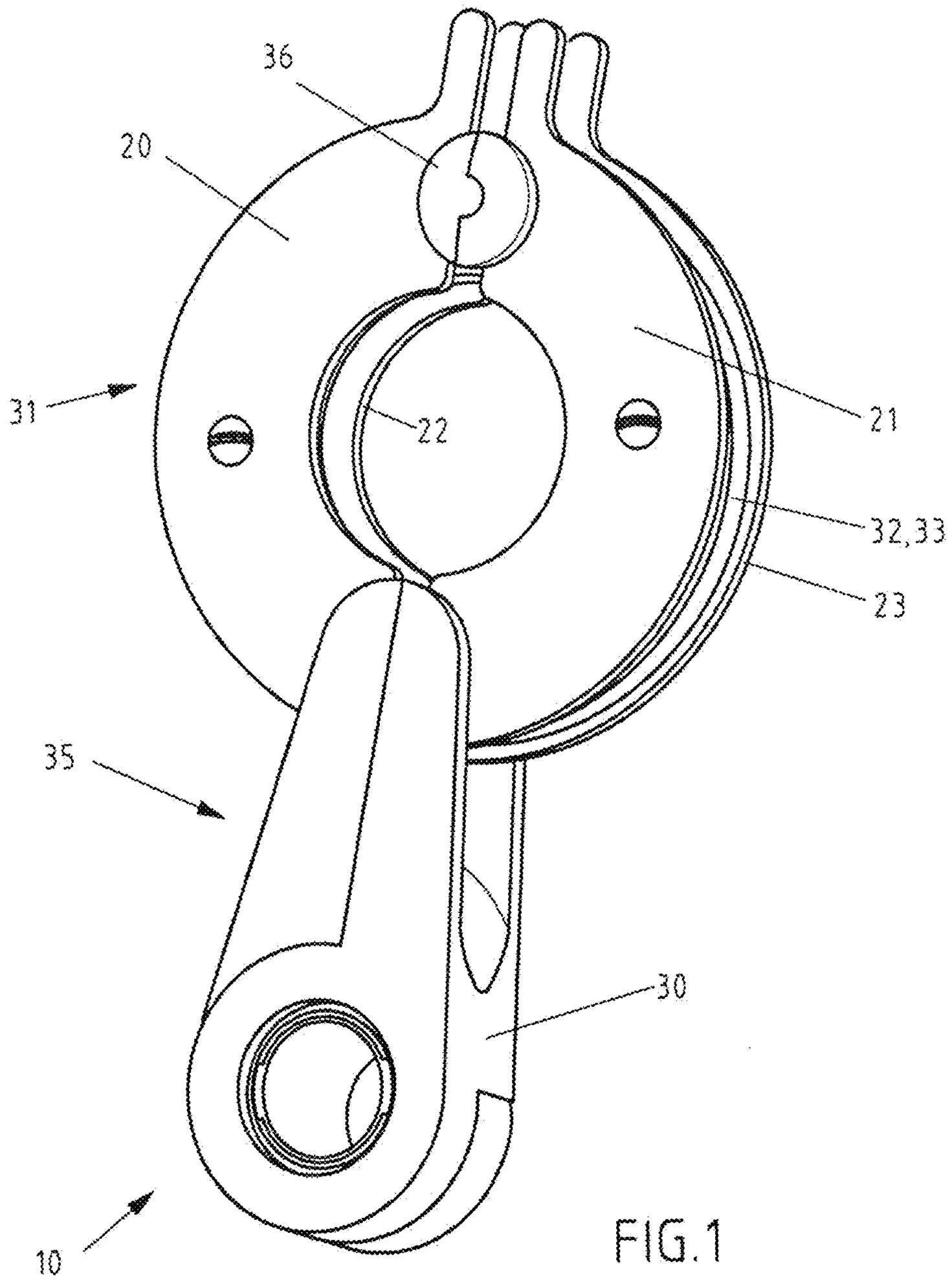


FIG.1

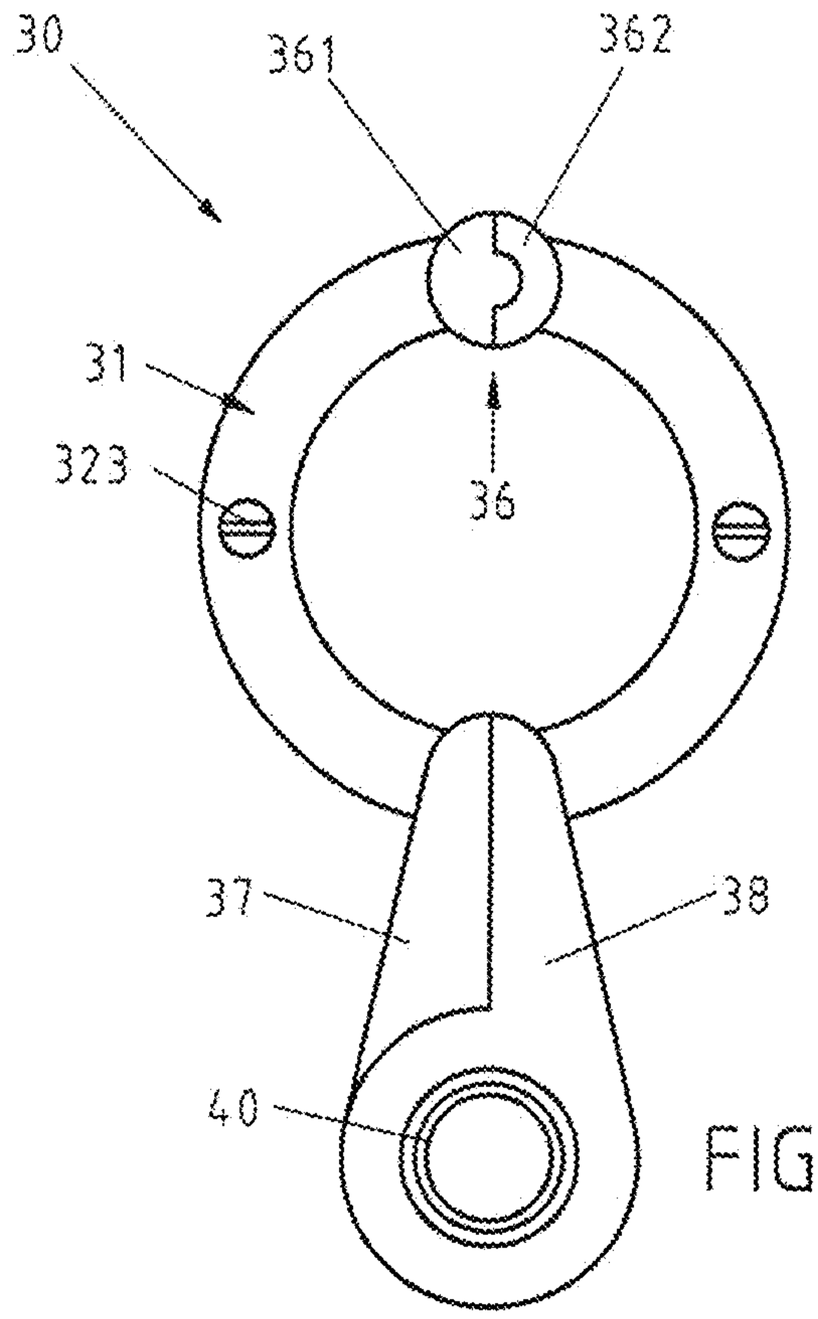


FIG.2

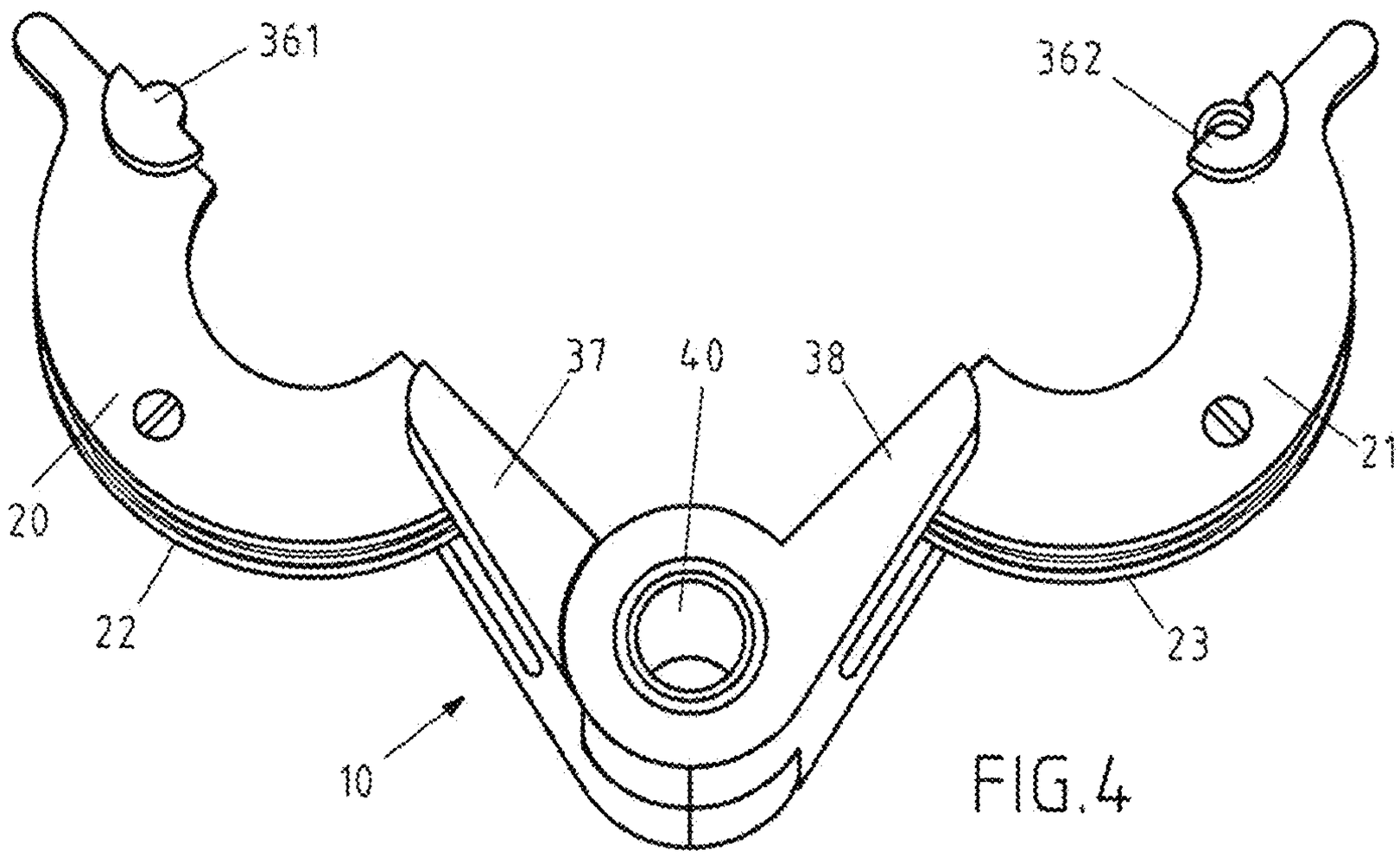


FIG.4

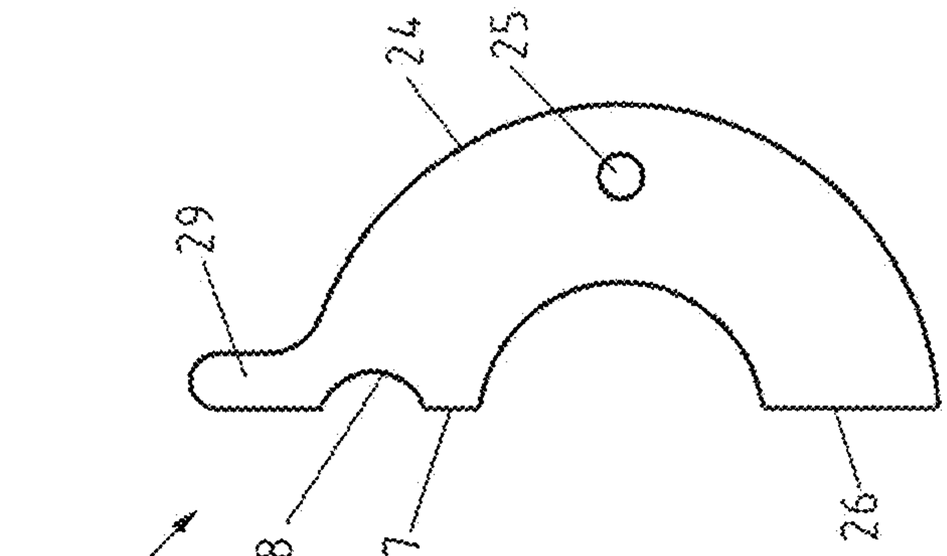


FIG.11

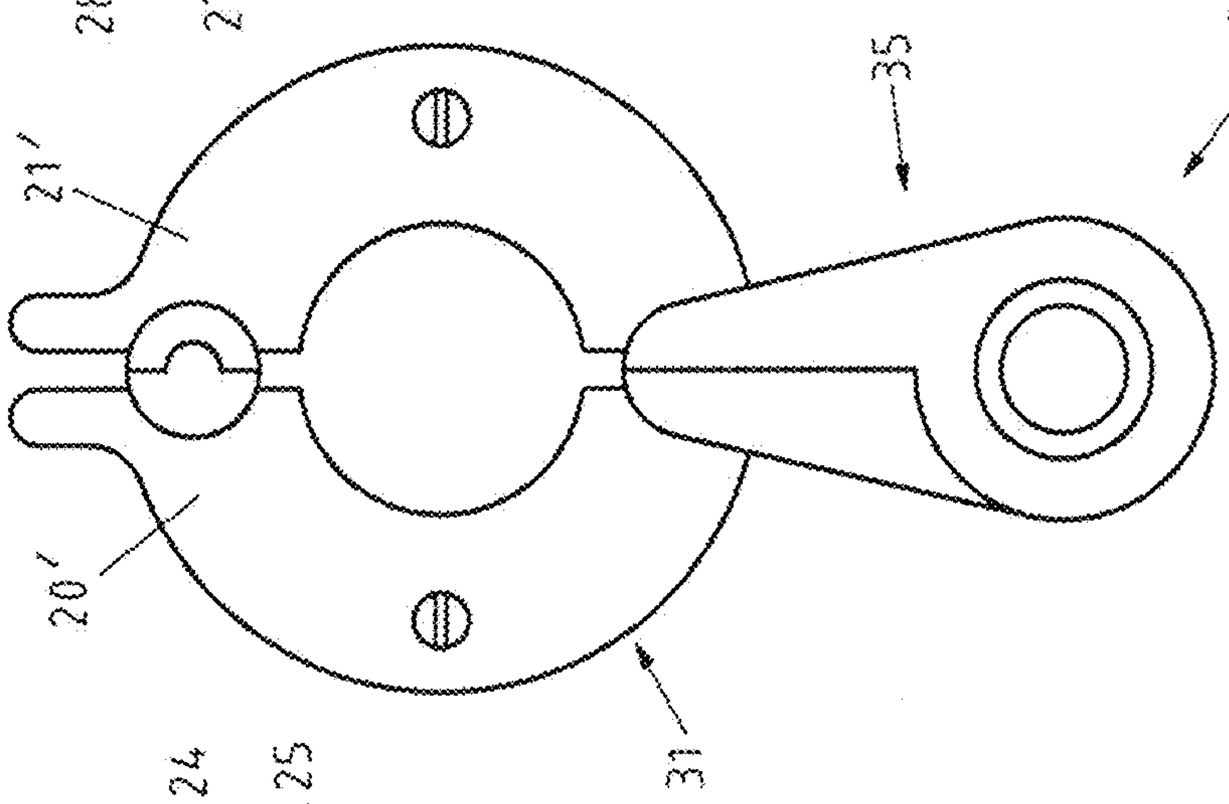


FIG.12

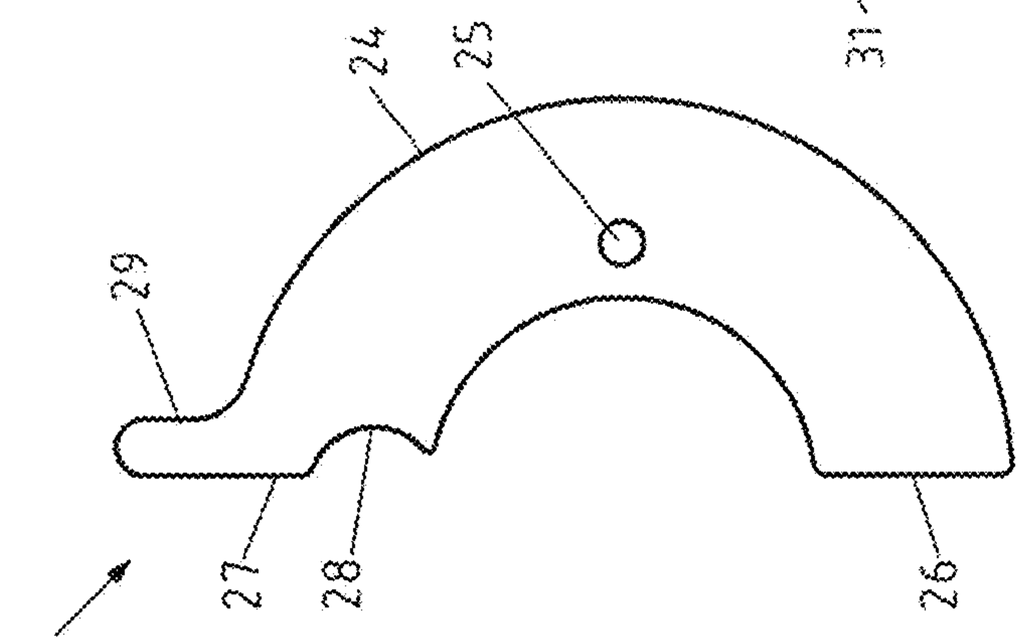


FIG.3

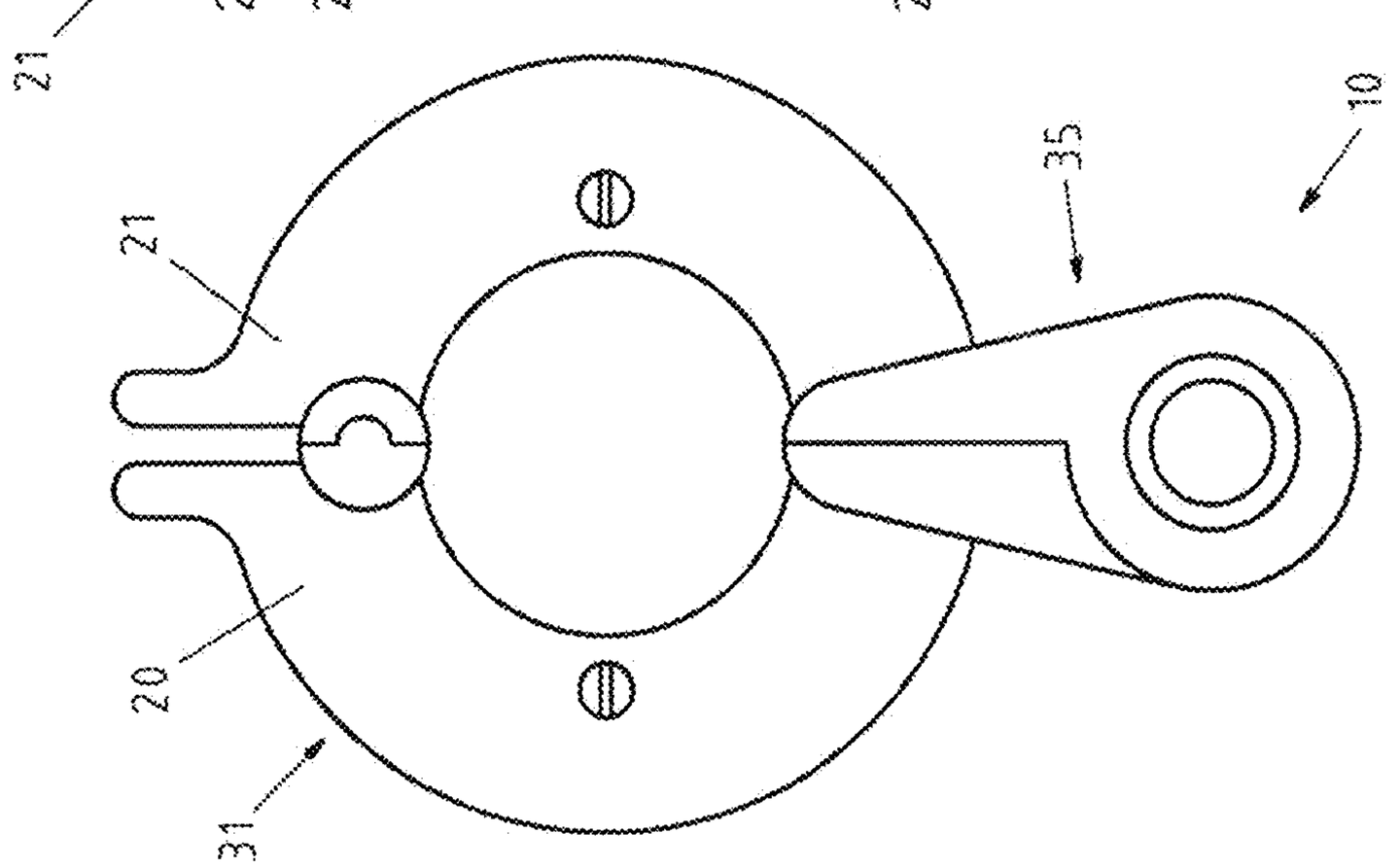


FIG.10

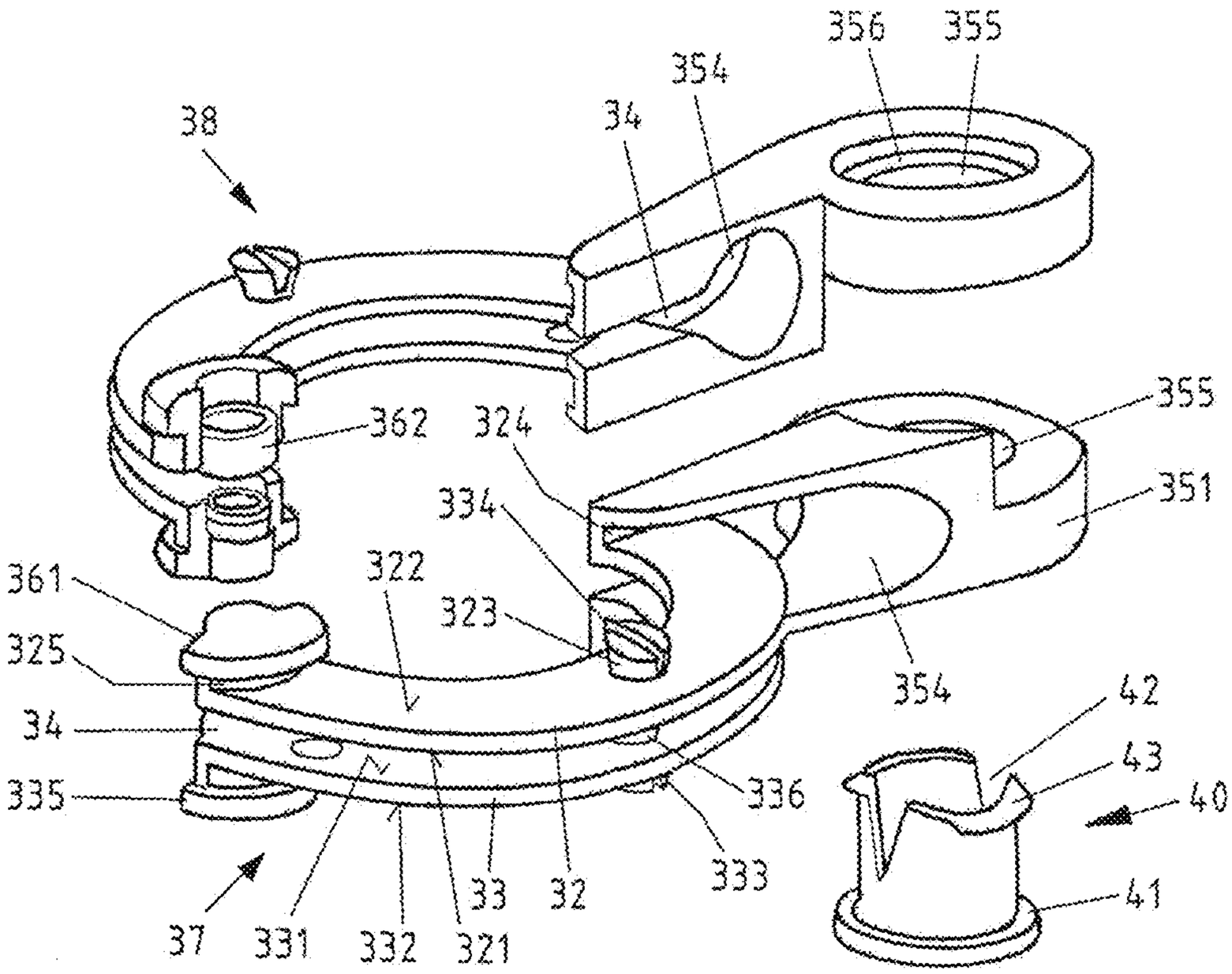

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FIG.5

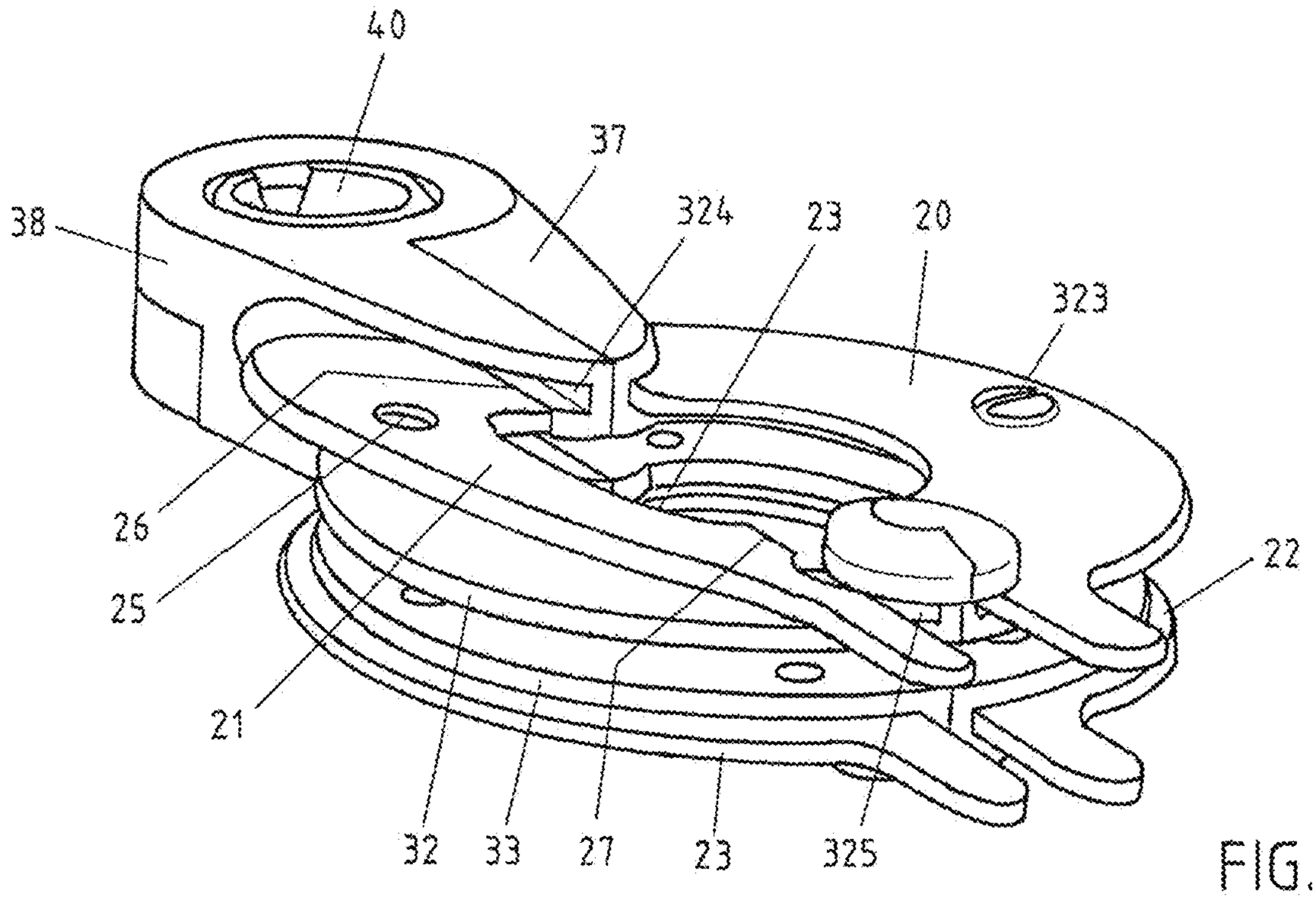
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FIG.6

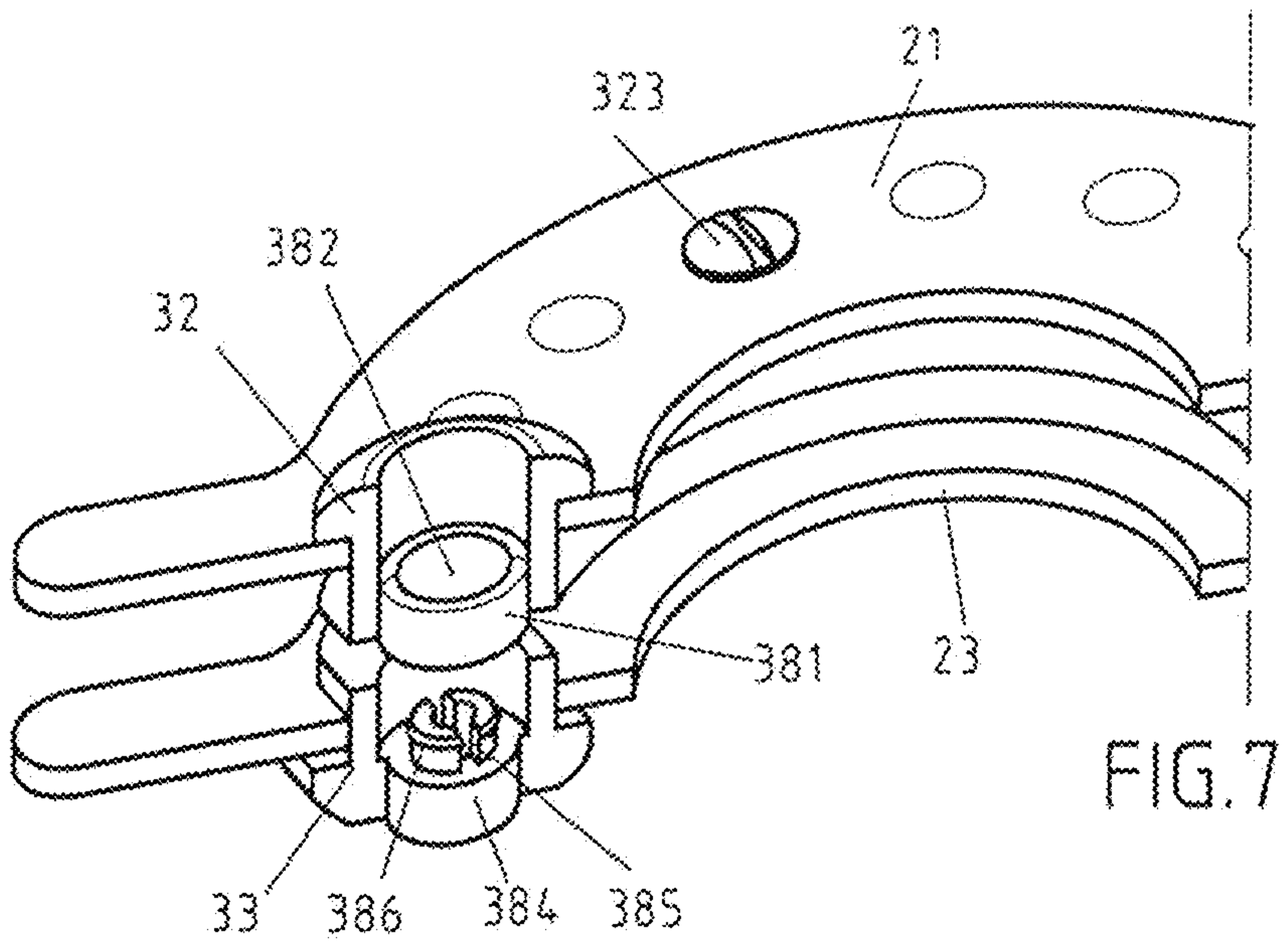

FIG.7

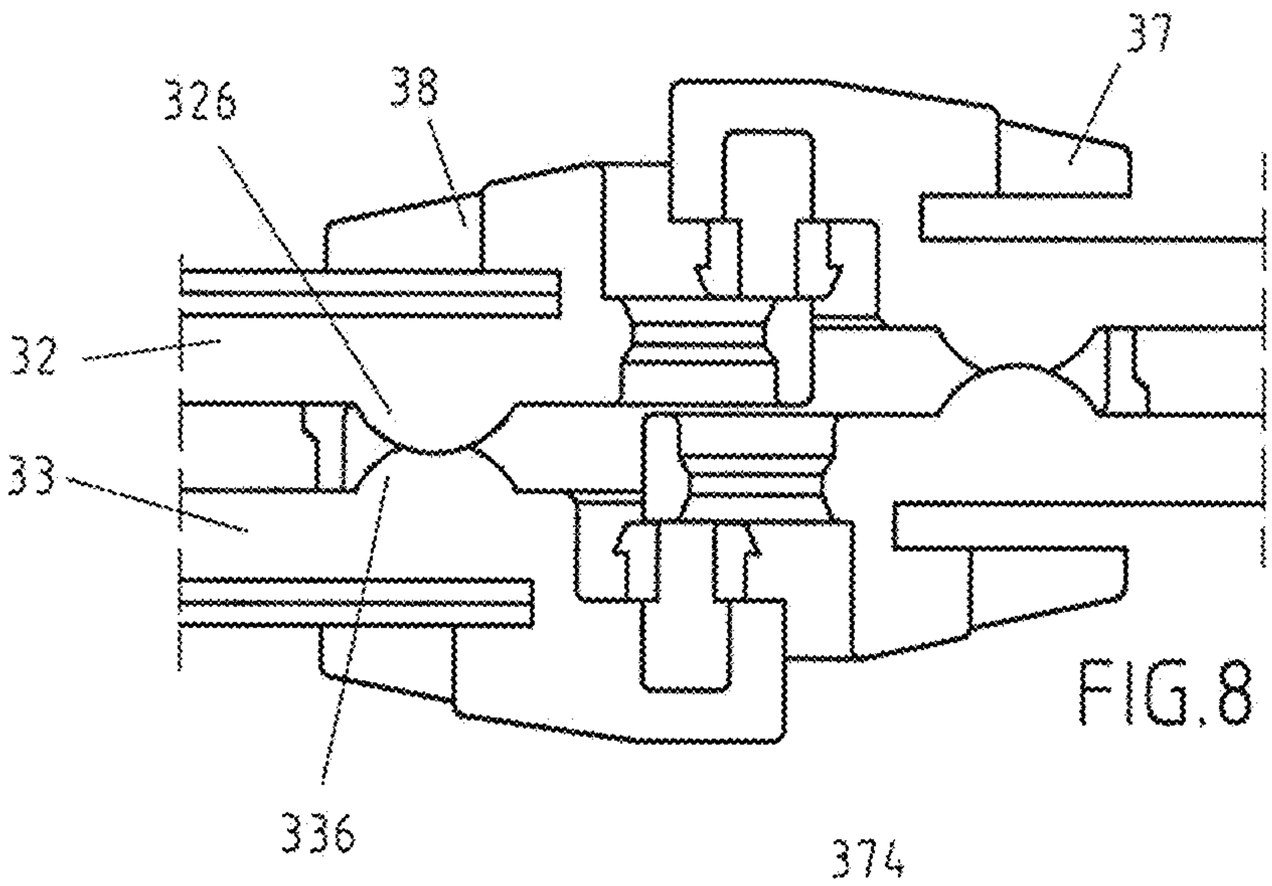

FIG.8

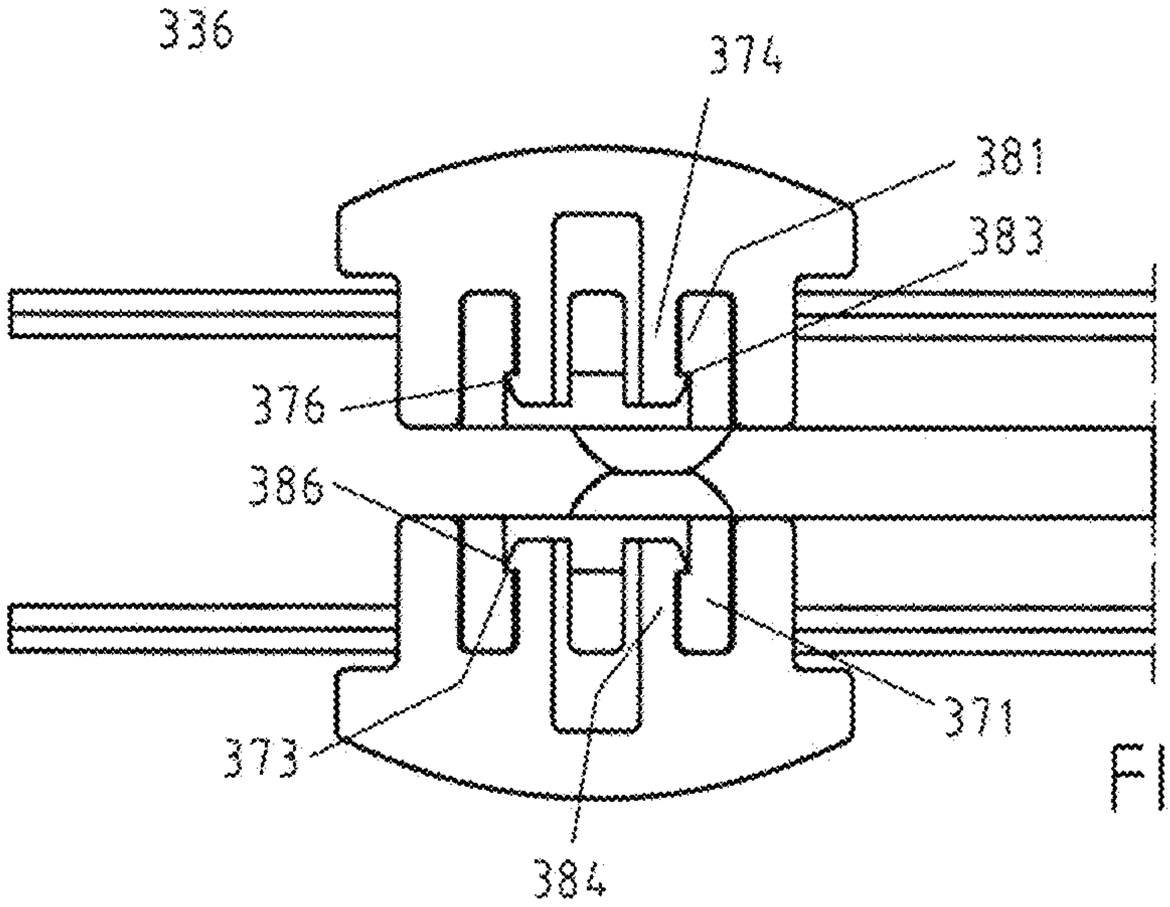

FIG.9

DEVICE FOR MAKING POMPONS

BACKGROUND

For the production of pompons, annular wrapping templates are known in which the serving for pomping yarn is continuously wound around the resulting ring between the central hole and the periphery. In order to avoid having to pass yarn through the central hole, it is known from document DE 3 722 854 A1 to form the winding ring from two identical ring halves, which are movably connected to one another, for example via a hinge. The hinge allows a pivot, whereby the winding process is facilitated because each ring half can be wrapped in succession. The winding ring is closed only after the winding process to carry out the final assembly of the pompom, namely to cut the yarn at its periphery. With a fastening thread, a thread loop is generated, which holds the finished pompon together. In order to facilitate the cutting in the periphery, the winding rings are spaced by nubs, so that a gap is formed, a cutting tool is inserted into the gap and cut along the periphery of the yarn package. A similar device with winding rings of two ring halves is shown in the design patent U.S. Pat. No. 2,751,515 S. A disadvantage of the aforementioned known winding templates that during manufacture of the pompon, the two winding rings can move apart or move against each other, so that the winding rings are no longer aligned. If this happens, it is no longer possible to achieve a desired form-fitting pompon and the wrapping process must be restarted.

The document JP 3 436 751 B2 shows a possibility of keeping the two winding disks in a coupled state. For this purpose, a support device is present, which consists of two support elements. At each support member two semicircular ring elements are pivotally supported. For wrapping, the carrier elements are connected and the ring elements pivoted away from the carrier device to the outside. For cutting the pompom along the entire periphery, the support elements must be separated from each other. The aforementioned device is structurally complex. Moreover, this device can only make pompons of one particular size.

It is an object of the present invention to provide an improved apparatus for producing a pompon, which is particularly simple in construction and can make pompons of various sizes.

SUMMARY OF THE INVENTION

This object is achieved with a device having the features of claim **1**. The dependent claims provide further advantageous features for such a device.

The new device for producing pompons comprises a ring carrier, which holds two winding disks in a holding region, wherein two half-ring-shaped disk halves together form a winding disk. Outside the holding area for the disc halves, the ring carrier has a handle. This handle can be grasped during the entire pompon production without hindering the winding process or the cutting.

The ring carrier is composed of two carrier elements, which are pivotally connected together at the handle end and at the other end via closure elements are connected to a releasable closure together, which then results in the holding area being a closed ring.

In an advantageous embodiment, the two pieces that make up the ring carrier are identical to each other. This allows a cost-effective production of the ring carrier. For example, if both carrier elements made of plastic by injection molding, only one tool for is needed for the injection molding.

Each support member has at the handle end a means for pivotal connection. In an advantageous embodiment, a through hole is provided at the handle end of the support elements. The through holes in the two support members are provided so that they are aligned in the assembled state of the support members and together give a hinge eye for a socket which is inserted into these through holes and allows a pivoting movement.

The carrier elements of the ring carrier are constructed so that they form a handle together at one end, namely the handle end, and extending from this handle end to each support member an arm. Closing elements are provided on the arm opposite the handle end, so that the two arms of the carrier elements can be connected to one another at this free end when the carrier elements are pivoted toward one another. In the closed position, the arms of the carrier elements form the holding area, which is located next to the handle. Preferably, the arms of the support elements are semicircular, so that an annular holding area is formed.

In a preferred embodiment, both arms of the carrier elements are designed such that they comprise two semicircular carrier layers arranged one above the other, wherein the carrier layers are not directly adjacent to one another, so that a gap exists between the carrier layers. In this way a gap is maintained during the winding process, and preferably knobs are arranged on the inner surfaces of the carrier layers, which ensure a constant distance of the carrier layers away from each other during the winding process.

On the arms of the support elements, semicircular disc halves are attached on both sides, which form a winding disk on both sides of the ring carrier yielding a closed ring carrier. For this purpose, a disc half is pushed onto the outside of the carrier layers of the two carrier elements in each case. The carrier elements of the ring carrier have for a secure hold of a disc half on the one hand a grip-side clamping gap and on the other hand a closure-side clamping gap, in which the respective lower or upper insertion edge of the disc half is inserted. Then the disc half is pressed onto the outside of the respective carrier layer. Here, the disc halves are held in an advantageous manner by clamping elements on the carrier layers of the ring carrier.

After assembling the four halves of the disc, the production of a pompon can be started. For this purpose, the ring carrier is brought into winding position, that is, the releasable closure between the two carrier elements is opened and, by winding yarn on the two arms of the carrier elements, a yarn package for the pompon is produced. When both halves of the ring carrier are wrapped in yarn, the carrier elements are pivoted toward one another and the closure parts are connected to one another. In this closed position, the yarn package can be sliced along the periphery of the winding disks. After this, a fastening thread may be securely inserted into the existing gap.

After making a pompon, other pompons of the same size can be made with the device. Furthermore, it is possible to produce pompons of a different size with the same ring carrier. For this purpose, the four half-ring-shaped disc halves may be removed and replaced by disc halves of a larger or smaller diameter. In this way, pompons of different diameters can be produced with a ring carrier together with a plurality of sets of winding disks.

The new device for producing pompons can thus be used in a way that permits the production of pompons of various sizes. It is also advantageous that the device consists of a few individual parts that are easy to install. In addition, when manufacturing the pompons, there are no problems with shifting of winding disks, and the handling of the apparatus

during the production of the pompons is easy. Advantageously, it is ensured by the closure on the ring carrier that when slicing the yarn package, the threads of the yarn package are firmly held together. In addition, the wide gap between the carrier layers of the carrier elements of the ring carrier and thus between the winding discs allows a clear guide for the scissors during the slicing process. In addition, handling is facilitated because the new device has a ring carrier with a handle outside the holding area of the winding disks.

Further measures and advantages of the invention are set forth in the description below. The invention is directed to all that is apparent from these new features.

DESCRIPTION OF THE DRAWING

The following drawing shows:

FIG. **1** is a perspective view of the device for producing pompons in the closed position,

FIG. **2** is a plan view of the closed ring carrier of FIG. **1**;

FIG. **3** is a plan view of a disc half of the winding disks of FIG. **1**,

FIG. **4** is a perspective view of the device of FIG. **2** in the open winding position,

FIG. **5** is a perspective view of the parts of the ring carrier of FIG. **2**,

FIG. **6** is a perspective view of the device for the production of pompoms during assembly,

FIG. **7** is a perspective detail of the ring carrier of FIG. **2**,

FIG. **8** is a sectional view of the ring carrier of FIG. **2** before closing,

FIG. **9** is a sectional view of the ring carrier of FIG. **2** in the locked position,

FIG. **10** is a plan view of the apparatus for producing pompons according to FIG. **1** with disk halves according to FIG. **3**,

FIG. **11** is a plan view of a disc half for a smaller winding disk, and

FIG. **12** is a plan view of the device for producing pompons with disc halves of FIG. **11**.

DETAILED DESCRIPTION

FIG. **1** shows the new device **10** for the production of pompons, which comprises the ring carrier **30** and in the holding region **31** we see the winding disks, namely a winding disk on the front and a winding disk on the back of the ring carrier **30**. Here, the winding disks are each composed of two semi-annular disk halves, namely the front winding disk of the disk halves **20**, **21** and the rear winding disk from the disk halves **22**, **23**. The ring carrier **30** has outside the holding portion **31** for the disk halves **20**, **21**, **22**, **23** a handle **35**. By means of the handle **35**, the device **10** can be well positioned in both the closed position shown in FIGS. **1** and **10** and in the open position shown in FIG. **4**, without the handle **35** hindering handling in the manufacture of the pompons.

The ring carrier **30** consists in this embodiment, as better seen in FIG. **2**, of two support members **37**, **38**. The support members **37**, **38** are pivotally connected to each other at the handle end **351** and each have a semicircular arm. Both arms extend to the other, free end, where closure members **361**, **362** are provided. By means of these closure parts **361**, **362**, the arms of the carrier elements **37**, **38** can be connected together to form a releasable closure **36** and form an annular holding region **31**.

The semicircular arms of the support members **37**, **38** are configured in this example, that they comprise two superposed semicircular support layers **32**, **33**, wherein the upper support layer **32** is not immediately adjacent the lower support layer **33**, but instead between the support layers **32**, **33**, a gap **34** is present. In order that the gap **34** is retained during the winding process, preferably nubs **326**, **336** are arranged on the inner surfaces of the carrier layers **32**, **33**, which ensure a constant spacing of the carrier layers **32**, **33** relative to one another during the winding process, see FIGS. **5** and **8**.

In the advantageous embodiment shown, the two carrier elements **37**, **38** are formed identically, as shown in FIG. **5**, where the individual parts of ring carrier **30**, namely, the two support members **37**, **38** and sleeve **40** which connects them are shown prior to assembly. For assembly, the two support elements **37**, **38** are stacked, wherein a support member is positioned in reverse orientation. The two support elements **37**, **38** each have at the handle end **351** a through hole **355**, which through holes are aligned after juxtaposition and result in a common through hole, which forms a hinge eye for the sleeve **40**. To this sleeve **40**, the support members **37**, **38** are pivotally mounted when the device is assembled. The central axis of the sleeve forms the pivot axis. In this example, the sleeve **40** has a collar **41** which rests on a clamping edge **356** of the through hole **355** of the one support member **37**. At the other end face of the sleeve **40**, two hook-shaped clamping elements **43** are arranged, which are held on the clamping edge **356** of the other carrier element **38**. The insertion of the sleeve **40** into the carrier element **37** and subsequently into the carrier element **38** is facilitated by the slot **42** in the sleeve. After mounting the sleeve **40**, the support members **37**, **38** are pivotally movable between an open position shown in FIG. **4** and a closed position shown in FIGS. **1** and **2**.

For the closure **36**, closure parts **361**, **362** are provided on both carrier elements **37**, **38**. As best seen in FIGS. **7** to **9**, both support elements **37**, **38** have the same closure parts **361**, **362**, namely on the one hand a clamp receptacle **371**, **381** and on the other hand a clamping bushing **374**, **384**. Since in the assembled position the one support member **37** is in reversed alignment with the other support member **38**, thus the clamping receptacle **381** of the support member **38**, which is located above the clamping bush **384**, cooperates with the clamping bush **374** of the other support member **37**, where the clamping bush **374** is located above. Furthermore, the clamping bush **384** located below in the carrier element **38** interacts with the clamping receptacle **371** of the carrier element **37** lying on top. When the closure elements **361**, **362** of the support members **37**, **38** are moved toward each other, the situation shortly before the connection is shown in FIG. **8**. In the closed position, shown in FIG. **9**, the clamping hooks **376** of the clamping bush **374** of the carrier element **37** engage behind a clamping edge **383** in the clamping receptacle **381** of the carrier element **38**. Likewise, in the closed position of FIG. **9**, the clamping hooks **386** of the clamping bush **384** of the carrier element **38** engage behind a clamping edge **373** of the clamping receptacle **371** of the carrier element **37**.

Semicircular disk halves **20**, **21**, **22**, **23** can be attached to the ring carrier thus formed. Such a disk half is shown in FIG. **3**. In the closed position, shown in FIGS. **1** and **10**, the disc half **21** and the disc half **20** complement each other to form a winding disc, and its outer edge **24** gives the outer diameter of the winding disc. This outer diameter determines the size of the pompon to be produced. The disk halves **20**, **21**, **22**, **23** are held on the ring carrier **30**. For assembly,

shown in FIG. **6**, an annular disc **21** is inserted with its lower insertion edge **26** in a grip-side clamping gap **324** on the carrier element **38** and the upper insertion edge **27** in a closure-side clamping gap **325** on the same support member **38**. Here, in this example, a recess **28** is provided on the disc halves **20**, **21**, **22**, **23** in the region of the upper insertion edge. It represents an adaptation to the shape of the closure elements **361**, **362** of the carrier elements **37**, **38**. After the insertion of the disc half **21**, this is pressed onto the carrier layer **32** of the carrier element **38**. In this case, a clamping element **323**, which is located on the outer surface **322** of the carrier layer **32**, engages in a suitable insertion hole **25** on the disc half **21**, whereby the disc half **21** comes to bear against the carrier layer **32**. In the same way, the other half disc **20** is mounted on the front side of the ring carrier **30** on the carrier element **37**. The disc halves **22**, **23** for the winding disc on the back of the ring carrier **30** are also inserted and fixed. Also on the rear side grip-side clamping gaps **334** for the lower insertion edge **26** and closure-side clamping gaps **335** for the upper insertion edge **27** and clamping elements **333** on the outside of the carrier layers **33** of the support elements **37**, **38** are provided, see FIG. **5** and FIG. **6**.

In FIG. **1**, all disc halves **20**, **21**, **22**, **23** mounted and the device **10** prepared for the preparation of the pompons. To produce the pompons, the closure **36** is now opened. For this purpose, one support element, for example the right support element **38**, is pushed forward and the left support element **37** is pushed forward, as a result of which the closure **36** opens. The support elements **37**, **38** are pivoted apart. They turn around the sleeve **40**. The winding process can now begin. Equally, an arm of the support member **37** is fully wrapped from the handle to the closure **36**. On the closure side, a tab **29** is provided on the disc halves, so that the closure is not wrapped. The thread end is secured and then the arm of the other support member **38** of the device **10** is wrapped in the same manner and secured here the thread end. The ring carrier **30** is now closed again. With a slicing tool, such as a pair of scissors, the yarn that has been wound onto the disc halves is sliced in its periphery. Here, the scissors engages in the gap **34** between the winding discs, formed from the disc halves **20**, **21** and **22**, **23**. This gap **34** is effected by the distance between the carrier layers **32**, **33** of the ring carrier **30**. Through this gap **34**, the scissors during slicing of the yarn package is securely guided, namely, from the closure **36** to the handle **35**. In the region of the handle **35** of the ring carrier **30**, a gap widening **354** is additionally provided in the carrier elements **37**, **38**, see FIG. **5**, so that the scissors are securely guided far into the grip area during separation. After separation, a double fastening thread is placed all around in the gap **34**, pulled together and knotted. After the slicing of the yarn, the gap **34** is opened. The distance between the inner surfaces of the carrier layers **32**, **33** is maintained by the nubs **326**, **336**. These nubs **326**, **336** have the further advantage that when tightening the fastening thread a clicking sound is caused, namely when the fastening thread is pulled through the nubs **326**, **336**. This sound indicates that the fastening thread is in the correct position and can be knotted. Thereafter, the ring carrier **30** is opened and the pompon is obtained.

Advantageously, as described above, the four disc halves **20**, **21**, **22**, **23** with a first outer diameter of, for example, 9 cm, shown in FIG. **3**, can be mounted on the ring carrier **30** shown in FIG. **3**. But then it is also possible, for example, to make a smaller pompon, by using the same ring carrier **30** with four pulley halves **21'** each smaller in its outer diameter, for example, 7 cm. To change the size of the pompon, the disc halves **20**, **21**, **22**, **23** can be easily detached from the ring carrier **30**, namely the disc halves **20**, **21**, **22**, **23** raised at the outer edge and pulled out of the clamping gaps **324**, **334**, **325**, **335** and then disc halves **21'** of a smaller diameter, shown in FIG. **11**, are mounted on the ring carrier **30**. This then results in a device **10'**, shown in FIG. **12**.

The individual parts of the device, in particular of the ring carrier **30**, are preferably made of plastic. The disc halves **20**, **21**, **22**, **23** may also be made of plastic, but may also be made of other materials such as cardboard. They can be colored and printed. In the case of several sets of disc halves **20**, **21**, **22**, **23** for a ring carrier **30**, it is advantageous to make the disc halves **20**, **21**, **22**, **23** of the same size using color to indicate the size. According to the shape of the disc halves **20**, **21**, **22**, **23**, in particular round pompons are produced. However, the disc halves **20**, **21**, **22**, **23** may also be shaped in other shapes, so as to be of the same or different diameter as templates for example to serve for different animal heads or such.

LIST OF REFERENCE NUMBERS

10, **10'** device, pompom maker
20, **21**, **22**, **23** disc half
21' half disc
24 outer edge
25 insertion
26 lower insertion edge
27 upper insertion edge
28 recess
29 tab
30 ring-bearer
31 holding area
32, **33** carrier layer
321, **331** inner surface
322, **332** outer surface
323, **333** clamping element
324, **334** grip-side clamping gap
325, **335** closure-side clamping gap
326, **336** nubs
34 gap
35 handle
351 handle end
354 widening gap
355 through hole
356 clamping edge
36 closure
361 connecting part
362 connecting member
37, **38** carrier element
371, **381** clamp receiver
372, **382** insertion opening
373, **383** clamping edge
374, **384** clamping bush
375, **385** slot
376, **386** clamping hook
40 jack
41 collar
42 slot
43 hook-shaped clamping element

The invention claimed is:

1. An apparatus for producing pompons comprising a ring carrier (**30**) with two winding discs in a holding region (**31**), wherein two semi-annular disc halves (**20**, **21**, **22**, **23**) each form a winding disc,

characterized,

in that the ring carrier (**30**) comprises a handle (**35**) outside the holding region (**31**) for the semi-annular disc halves (**20**, **21**, **22**, **23**),

wherein the ring carrier (**30**) is constructed of two carrier elements (**37**, **38**), which are pivotally connected together at one end forming a handle end (**351**) and which have a closure part (**361**, **362**) for a releasable closure (**36**) at the other end,

further characterized in that each carrier element (**37**, **38**) has an arm of two superimposed, semicircular carrier layers (**32**, **33**), wherein each carrier layer (**32**, **33**) releasably holds one of the semi-annular disc halves (**20**, **21**, **22**, **23**).

2. The apparatus according to claim **1**, characterized in that the two carrier elements (**37**, **38**) are formed identically, wherein one of the carrier elements (**37**) is pivotally connected in an inverted orientation with the other carrier element (**38**).

3. The apparatus according to claim **1**, characterized in that the two carrier elements (**37**, **38**) have a through hole (**355**) at the handle end (**351**) and both through holes (**355**) together form a hinge eye for a bushing (**40**), wherein the central axis of the bushing (**40**) is a pivot axis of the handle.

4. The apparatus according to claim **1**, characterized in that a gap (**34**) is present between the carrier layers (**32**, **33**) of each pair of carrier elements (**37**, **38**).

5. The apparatus according to claim **4**, characterized in that each semi-annular disc half (**20**, **21**, **22**, **23**) has a lower insertion edge (**26**) in a grip-side clamping gap (**324**) of a carrier element (**37**, **38**) and has an upper insertion edge (**27**) held in a closure-side clamping gap (**324**) of the same carrier element (**37**, **38**).

6. The apparatus according to claim **4**, characterized in that for detachable mounting of each semi-annular disc half (**20**, **21**, **22**, **23**) on the outside of the carrier layer (**32**, **33**) at least one clamping element (**323**, **333**) is arranged, into which a corresponding insertion hole (**25**) of the semi-annular disc half (**20**, **21**, **22**, **23**) engages.

7. The apparatus according to claim **5**, characterized in that at the upper insertion edge (**27**) of one or more semi-annular disc halves (**20**, **21**, **22**, **23**) beyond the closure-side clamping gap (**325**, **335**) a tab (**29**) is extended outwardly, which serves to limit a winding area.

8. The apparatus according to claim **4**, characterized in that the carrier layers (**32**, **33**) have inner surfaces (**321**, **331**), on which nubs (**326**, **336**) are provided.

9. The apparatus according to claim **4**, characterized in that the gap (**34**) between the semicircular carrier layers (**32**, **33**) terminates by widening (**354**) at the handle end of the carrier elements (**37**, **38**).

10. The apparatus according to claim **1**, characterized in that on the two carrier elements (**37**, **38**) complementary closure parts (**361**, **362**) are provided.

11. The apparatus according to claim **10**, characterized in that the two carrier elements (**37**, **38**) have an insertion opening (**372**, **382**) and a clamping bushing (**374**, **384**), wherein the insertion opening (**372**) of one of the carrier elements (**37**) cooperates with a clamping bushing (**384**) of the other carrier element (**38**) and the clamping bushing (**374**) of the one carrier element (**37**) cooperates with the insertion opening (**382**) of the other carrier element (**38**).

12. The apparatus according to claim **1**, characterized in that the ring carrier (**30**) holds winding discs of semi-annular disc halves (**20**, **21**, **22**, **23**) of a first diameter, or after their removal has winding discs from semi-annular disc halves (**20**, **21**, **22**, **23**) of a different diameter or of a different shape.

13. The apparatus according to claim **1**, characterized in that the ring carrier (**30**) is comprised of plastic.

14. The apparatus according to claim **1**, characterized in that the semi-annular disc halves (**20**, **21**, **22**, **23**) are made of plastic or cardboard and the semi-annular disc halves (**20**, **21**, **22**, **23**) are of a color other than black or white or gray.

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